MULTIMEDIA UNIVERSITY

STUDENT ID NO

TABLE NO: _____

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2015/2016

TIS2351/THI3461 – HUMAN COMPUTER INTERACTION

(All sections / Groups)

1st MARCH 2016
9.00a.m – 11a.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 12 pages with 5 Questions only.

2. Attempt **FOUR** out of FIVE questions. All questions carry equal marks and the distribution of the marks for each question is given.

3. Please print all your answers in the answer boxes provided.

Question 1 – 10 marks

1a) Recall the meaning of interaction design (2 marks).
1b) Identify 2 terms that have been used to emphasize different aspects of what is being designed (4 marks).
1c) List 4 cognitive aspects that can be designed for Human Computer Interaction systems (4 marks).

Answer

Continued .....

Question 2 – 10 marks

2a) State 2 advantages of low-fidelity prototyping and 2 advantages of high-fidelity prototyping (4 marks).

2b) Highlight the 2 differences between Telepresence and Co-presence communication technologies to support social interaction in Human Computer Interaction design (4 marks).

2c) Analyse the distinction between Instructing and Conversing types of interaction. Give two examples about how these two types of interaction can be done (2 marks).

Answer

Continued .....

Question 3 – 10 marks

Read the description below and answer the following questions:

> Health problems related to diet, including obesity and cancer, are important concerns in the current society. The main treatment for obesity includes dieting and frequent physical activity. Diet programs keep and cause weight loss over short, medium, or long term. However, to maintain balanced body energy, a frequent physical exercise is required. SapoFitness is a mobile health application for users to evaluate their diet. The alert function motivates the user to use the system and keep their diet plan. SapoFitness is customized to its user keeping a daily record of his/her food intake and daily exercise. The main goal of this application is to offer a motivation tool for weight reduction and increase physical activity. SapoFitness includes the ability to share personal achievements with social networks, a very intuitive human device interaction and control weight, applying not only to control obesity but also to malnutrition problems. The application offers a continuous alert system activity, sending alerts/messages concerning the user diet program taking into account also his/her physical activity. SapoFitness is a challenging mobile application that delivers the action to the user, motivating for a healthier life style.

Demonstrate the key requirements for this mobile application. The key requirements that must be applied in your answers as follows:
3a) Functional requirement (2 marks).
3b) Data requirement (2 marks).
3c) Environmental requirement (2 marks).
3d) User characteristics (2 marks).
3e) Usability goals (2 marks).

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Answer

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Question 4 – 10 marks

Read the description below and answer the following questions:

> Asthma is a chronic disease and a growing health problem worldwide. The objective of this evaluation study was to test the feasibility and utilization of tracking asthma symptoms through an innovative mobile phone application. The subjects for this research project consisted of individuals who are currently receiving treatment for asthma from a primary care physician in Putrajaya Hospital. Participants took their peak flow reading each day and used the short message service (SMS) function on their phone and sent it to a Web server. If they did not send it by 11 AM, they received a reminder via an automated SMS to their phone. The resulting data suggest that this method of management is feasible. The data also demonstrate participants' satisfaction in monitoring their asthma in this manner. Using mobile phones for asthma management could improve compliance with asthma action plans and reduce adverse asthma events. Future research could further demonstrate that mobile phones are a new and effective method for providing healthcare.

4a) Determine the kind of setting for this evaluation and justify your answer (2 marks).

> Next, you need to design sample of questionnaires for this evaluation study that offers different formats of question and response. The formats of question and response must be applied in your answers as follows:

4b) Check boxes (2 marks).
4c) Ranges (2 marks).
4d) Likert scales (2 marks).
4e) Semantic differential scales (2 marks).

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Answer

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Question 5 – 10 marks

Figure 1 shows a mobile application interface design called Pantry Raid. This app helps a user better manage their on-hand fresh food and eliminate food waste. A user can track food expiration dates and the application will suggest recipes using only on-hand ingredients. Figure 2 and 3 show My Fridge interface and My Pantry interface respectively.

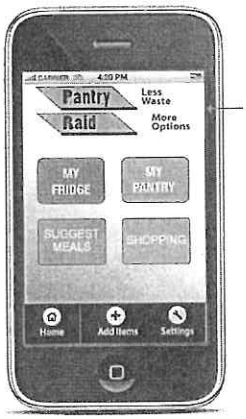

Figure 1. Pantry Raid – main menu interface design

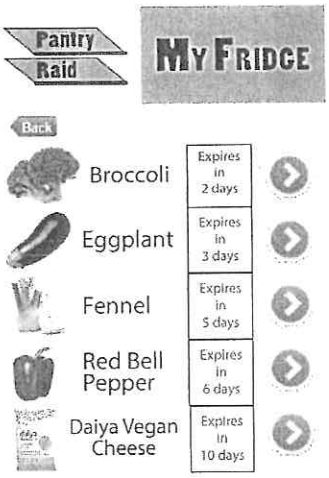

Figure 2. My Fridge –interface design

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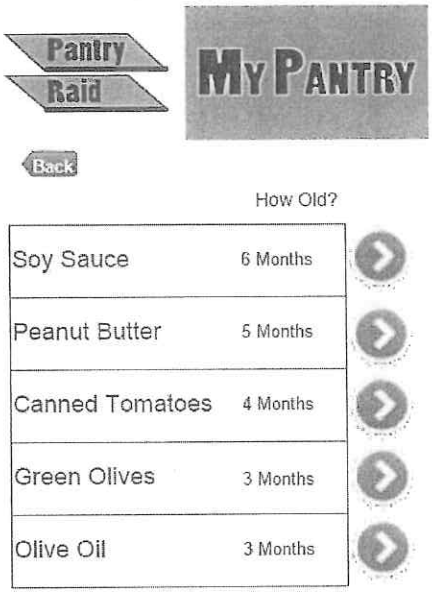

Figure 3. My Pantry – interface design

Develop hand-drawn sketches to demonstrate the interface design activities as follows:
5a) Suggest meals by Expiring Ingredients (2 marks).
5b) Manage My Pantry (2 marks).
5c) Add recipe (2 marks).
5d) Generate shopping list (2 marks).
5e) Review shopping suggestions (2 marks).

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Answer

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Answer

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Answer

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